

## METHODS AND COMPOSITIONS FOR MODULATING CNTF ACTIVITY

### ABSTRACT OF THE DISCLOSURE

- 5           Methods and compositions for altering, or modulating CNTF activity by altering or modulating cytokine inhibitor activity are provided. Specifically encompassed are methods and compositions to alter activity of cytokine inhibitors such as SOCS-1, -2, and -3. SOCS-3 expression is rapidly induced by CNTF treatment in regions of the hypothalamus that are known to be involved in the regulation of body
- 10   weight. As described herein, a SOCS-3-mediated CNTF cell-signaling inhibitory pathway exists, suggesting that SOCS-3 is a negative regulator of CNTF signal-transduction in the brain. Since CNTF treatment of animals suppresses appetite and induces weight loss, inhibition of SOCS-3 expression or activity is a potential target for the development of drugs aimed at improving CNTF sensitivity or prolonging CNTF
- 15   activity in a mammal and inducing weight loss. Thus, altering SOCS-3 activity provides a means for modulating CNTF-induced cell signaling and therefore modulating bodyweight.

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